Is SPAC Sponsor Compensation Evolving? A Sober Look at Earnouts[1]

Michael Klausner[2]
Michael Ohlrogge[3]

January 31, 2022

Abstract

SPACs have been widely criticized for imposing high costs on SPAC shareholders and for the incentive they create for sponsors to enter into mergers that are bad deals. Some SPACs adopt sponsor earnouts, which reduce a sponsor's compensation unless specified post-merger share price targets are met. The claim in favor of earnouts is that they respond to these two flaws in the basic SPAC design. We find, however, that earnouts as currently structured have a minimal impact on either cost or incentive misalignment. We show that earnouts can be improved, but that there are inherent limits to what an earnout, or any compensation mechanism, can accomplish. At best, a well-structured earnout, when coupled with a substantial investment in a merger by a sponsor, can deter a sponsor from proceeding with a merger that would be a seriously bad deal for shareholders. It will not deter a deal that is simply bad. We conclude with a proposal for more accurate disclosure of earnouts.

[1] We thank Helena Abbott, Todd Gilman, Myles Odermann, and Wenting Tao for excellent research assistance on this project. We thank Ken Ayotte, Andrew Baker, Robert Bartlett, Steve Choi, Harald Halbhuber, Marcel Kahan, Scott Kupor, Dave Larcker, Frank Partnoy, Ed Rock, and Jerry Rosenfeld for helpful comments.
[2] Nancy and Charles Munger Professor of Business and Professor of Law, Stanford Law School.
[3] Assistant Professor of Law, New York University School of Law.

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Introduction

Sponsor earnouts have been touted as a new, innovative[4] way to reduce costs[5] and align sponsor and shareholder interests[6] in special purpose acquisition companies, or "SPACs," by tying sponsor compensation to post-merger share price performance. SPACs themselves, in their SEC filings, explicitly or implicitly describe earnouts as accomplishing these objectives.[7] [8] Policymakers[9] and academics[10] point to sponsor earnouts as an important way to improve SPACs. In this paper, we investigate whether the claims in favor of earnouts are valid, and we conclude that they are not. Sponsor earnouts are not new, and as typically structured, they do

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[4] *See, e.g.*, Minmo Ghang, Jay R. Ritter & Donghang Zhang, *SPACs*, J. FIN. ECON. (forthcoming in 2022) (describing earnouts as an "emerging contingent feature" of SPACs, and arguing that earnouts are a part of an "adjust[ment] toward a more sustainable equilibrium."). *See also* Yun Li, *SPACs break 2020 record in just 3 months, but the red-hot industry faces challenges ahead*, CNBC (Mar. 19, 2021) ("To prove that the market is not just a cautionary tale on Wall Street, SPACs are evolving their structure to become more investor friendly and reduce the outsized benefit for sponsors."). *See infra* Part I.B for additional quotes to this effect.

[5] *See, e.g.*, Skadden Arps, *The Year of the SPAC* (Jan. 26, 2021), https://www.skadden.com/insights/publications/2021/01/2021-insights/corporate/the-year-of-the-spac (describing earnouts as a "response" to the "view that de-SPAC transactions can be more expensive … than a traditional IPO."). *See also* Goldman Sachs, *The IPO SPAC-Tacle* (Jan. 28, 2021), https://www.goldmansachs.com/insights/pages/top-of-mind/the-ipo-spac-tacle/report.pdf (arguing that while the base level of the SPAC sponsor's promote, coupled with SPAC warrants, can render SPACs more expensive than IPOs, if sponsors subject some of their promote to earnouts, then a "SPAC may actually look on par or less expensive than the traditional IPO.")

[6] *See* Nicholas Jasinski, *This SPAC Is Aligned with Shareholders*, BARRON'S (Jul. 11, 2021), https://www.barrons.com/articles/gs-acquisition-holdings-space-51626041014 (arguing that with an earnout in place "there's no incentive for sponsors to just get any deal done."). *See also* Tom Zanki, *Blank-Check Sponsors Get Creative in Crowded Market*, LAW360 (Sep. 28, 2020), ("some issuers have begun to veer from well-worn paths in order to better entice investors" by, for instance, "negotiat[ing] their paydays in order to demonstrate to shareholders that they are committed to investors' success as well as their own.").

[7] For instance, Acamar Partners presented a diagram of post-merger ownership that treated sponsor shares subject to an earnout as having zero value, despite never giving any clear indication of this assumption. Acamar Partners, Current Report (Form 8-K) at 44 (Nov. 17, 2020). *See infra* Part I.B for additional examples of misleading filings.

[8] For example, Fortress Value Acquisition Corp. II stated that it "has amended the terms of its founder equity to align with long-term value creation and performance of the Company," Fortress Value Acquisition Corp. II, Current Report (Form 8-K) Exhibit 99.1 at 1(Feb. 22, 2021). *See infra* Part I.B for additional examples of misleading filings.

[9] *See* Letter from Senators Elizabeth Warren, Sherrod Brown, Tina Smith, and Chris Van Hollen (Sep. 22, 2021), seeking information from SPAC sponsors about, among other things, how many sponsors use earnouts "in order to understand what sort of Congressional or regulatory action may be necessary to better protect investors.", https://www.warren.senate.gov/imo/media/doc/SPAC%20letters%20[Combined].pdf.

[10] *See, e.g.*, Bobby Reddy, *The SPACtacular Rise of the Special Purpose Acquisition Company: A Retail Investor's Worst Nightmare*, J. CORP. L. STUD. (forthcoming in 2002), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3968983 (writing "[t]he dynamics of US-style SPACs could also be moderated by mandating that performance-related conditions should attach to … sponsors' promotes."). *See also* Jessica Bai, Angela Ma, and Miles Zheng, *Segmented Going-Public Markets and the Demand for SPACs,* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3746490 ("mitigating the potential short-termism of SPAC sponsors is important for protecting public investors and maintaining financial stability ... We suggest … earnout provisions... may help alleviate agency issues."). *See also* Nilsson, Gül Okutan. *Incentive Structure of Special Purpose Acquisition Companies*, 19.2 *EUR. BUS. ORG. L. REV.* 253, 253-274 (2018) ("adjusting the compensation scheme by linking it to post-acquisition stock performance may better serve shareholder interests.")

little to either reduce SPAC costs or to align sponsor interests with shareholder interests. SPAC disclosures that state or imply otherwise are misleading. We show that restructuring earnouts can improve their effectiveness, but only modestly, and we propose a framework for accurate disclosure of earnouts to investors.

A SPAC is a form of publicly traded blank check company through which a private company can go public in a merger. It is organized, taken public, and in effect managed by a sponsor. The sponsor may be associated with a private equity, venture capital, or hedge fund, or it may simply be an individual or group of individuals.[11] When the sponsor forms a SPAC, it takes its compensation in the form of a "promote" typically consisting of 20% of the SPAC's post-IPO shares, which it purchases for a nominal price. The sponsor then takes the SPAC public in an IPO, issuing units containing shares and warrants, typically for $10 per unit. Concurrently with the IPO, the sponsor makes an investment in SPAC warrants and/or shares, the proceeds of which are used to cover the underwriting fees of the SPAC's IPO plus the SPAC's expenses between the time of the IPO and its eventual merger. At the time of the merger, three changes in the SPAC's capital structure may occur. First, the sponsor may agree to forfeit some of its promote shares. Second, the SPAC often raises new equity in the form of private investment in public equity (PIPE). Third, public shareholders have a right to redeem their shares rather than invest in the merger, and they often redeem a substantial fraction of public shares outstanding.

The sponsor's promote has been widely criticized, by us among others, for being costly to SPAC shareholders and for misaligning the interests of sponsors and SPAC shareholders.[12] The cost takes the form of dilution of SPAC shares. When the SPAC eventually merges, it will have roughly 20% less cash per share as a result of the sponsor's promote.[13]

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[11] A SPAC is corporation and therefore technically managed by a board of directors and a management team. But individual(s) that own and manage the sponsor are typically the same individuals who manage the SPAC. We therefore treat the sponsor as the manager of the SPAC.

[12] *See* Michael Klausner, Michael Ohlrogge & Emily Ruan, *A Sober Look at SPACs*, 39 YALE J. ON REG. 228 (2022). Lora Dimitrova, *Perverse incentives of special purpose acquisition companies, the "poor man's private equity funds*, 63.1 J. ACCT. & ECON. 99-120 (2017). *See also* Vijay M. Jog and Chengye Sun, *Blank check IPOs: a home run for management* (2007), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1018242. *See also* Usha Rodrigues and Mike Stegemoller, *SPACs: Insider IPOs* (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3906196.

[13] After the SPAC's IPO, developments can either increase or decrease this 20% figure. If the SPAC experiences high redemptions, then the promote can be greater than 20% of pre-merger equity. If the SPAC secures a large PIPE, or if the sponsor cancels some of its shares outright, the promote can be less than 20% of pre-merger equity. In our prior investigation into SPACs from January 2019 through June 2020, we found that for most SPACs, the promote grows to larger than 20% of pre-merger equity. *See* Klausner et al. (2022) *supra* note 12.

The misalignment of interests is more complex. SPAC charters typically allow between one and two years to find a private company with which to merge and thereby take public. When a sponsor has identified a merger partner and negotiated a merger agreement, it proposes the merger to the SPAC shareholders, who may then exercise their redemption right. The redemption price is the $10 price of the units sold in the SPAC's IPO, plus interest. A redeeming unit holder, however, redeems just the shares and keeps the warrants for free. Typically, a merger partner negotiates the right to pull out of a deal if redemptions bring cash below a specified level. This would be a bad outcome for a sponsor. If the sponsor fails to consummate a merger within the one to two years allowed by its charter, the SPAC must liquidate and distribute the IPO proceeds to shareholders.[14] If that occurs, both the sponsor's 20% promote and its initial investment will be worth nothing. Consequently, although a sponsor wants the best deal it can get, it will profit from a deal that sees share prices crash far below the $10 redemption price available to shareholders. A bad deal for shareholders is a still a good deal for a sponsor. The sponsor of a SPAC that has proposed a merger thus has a strong interest in either convincing current shareholders to hold onto their shares or in attracting new public investors their shares on the market. The accuracy of the disclosures a SPAC makes to shareholders in connection with its merger is therefore particularly important.

A sponsor earnout is a form of contingent compensation that has been touted as a new innovation that aligns the interests of sponsors and shareholders. It works as follows. Typically applying to 30 to 40% of the shares in the sponsor's promote, an earnout requires that a SPAC's post-merger share price reach specified thresholds before the sponsor receives those shares. If the post-merger share price does not reach a threshold within the term of the earnout – most commonly five or more years – the corresponding promote shares are cancelled. So, for example, a sponsor might receive a total of 10 million promote shares, with 6 million granted outright, 2 million granted if the share price reaches $12.50 within 5 years of the SPAC's merger, and 2 million granted if the share price reaches $15.00 within 5 years.[15]

[14] A sponsor may also seek shareholder approval for an extension of time. To do so, however, a SPAC must offer its investors the opportunity to redeem their shares. In many cases, SPAC shareholders take this opportunity to redeem, which significantly impairs the ability of the SPAC to enter into an attractive merger thereafter.

[15] A small number of SPACs have experimented with alternative compensation schemes. These include Pershing Square Tontine Holdings (PSTH), sponsored by Bill Ackman, the CAPS structure, associated with the investment bank Evercore, and the SAIL structure, associated with JP Morgan. These structures, which are adopted at the IPO-stage, seek to achieve many of the same goals of sponsor earnouts. In the interests of brevity, and because these structures represent only a very small fraction of current SPACs, we do not directly analyze them in this paper.

Commentators, SPAC sponsors, and the lawyers and bankers who negotiate and advise on SPAC mergers argue that by subjecting a sponsor's promote to an earnout, a SPAC aligns the sponsor's interests with the interests of its shareholders. By canceling sponsor shares when a post-merger company performs poorly, they argue, an earnout also reduces the dilution that the promote imposes on SPAC shareholders.[16] SPAC managers and sponsors make similar claims in their pitches to investors and in their proxy statements issued in connection with mergers.[17]

Aligning sponsor and shareholder interests, however, is more difficult than it appears. Even without an earnout, a sponsor has a strong interest in finding the highest value merger it can. A lack of effort by sponsors is therefore not SPACs' primary problem. Instead, the problem arises when the best merger a sponsor can find is not a good deal for SPAC shareholders. In that case, the SPAC should liquidate and return the shareholders' investment. In a liquidation, however, the sponsor will reap no return and will lose its initial investment. Even a bad merger with an earnout will give a sponsor more compensation than it receives in a liquidation, and so an earnout can never on its own incentivize a sponsor to choose liquidation over proposing a bad merger.[18]

To eliminate a sponsor's incentive to propose a bad merger, an earnout must reduce the present value of a sponsor's shares to zero in the event a SPAC enters into a merger that is a bad deal for shareholders – that is, a deal worth less than $10 per share. Such an earnout is not possible, however. The root of the problem is that shares subject to an earnout are in essence an option-like security.[19] Even if a SPAC enters into a merger with a low present value, sponsor shares subject to the earnout retain option value so long as there is some chance that the post-merger share price will rise above $10. This is particularly true where the SPAC's post-merger share price is highly volatile, as is typically true of post-merger SPACs, and where the period to satisfy the earnout's targets is long, as they typically are.

To illustrate this problem, suppose a sponsor is considering a merger that has a 50/50 chance of being worth either $0 or $16 for SPAC shareholders, for an expected value of $8. *Ex ante*, this is a bad bet for the shareholders; they are better off having the SPAC liquidate and

[16] *See supra* notes 4 and 6. *See also infra* Part I.B for additional such claims.
[17] *See supra* note 8. *See also infra* Part I.B. for additional examples.
[18] Because the sponsor drives SPAC management's decision-making, we will refer to the sponsor as the decision maker.
[19] A promote share subject to an earnout could be described as a Parisian knock-in barrier option.

return $10 per share plus accrued interest. The sponsor, however, will still have a 50% chance of satisfying the earnout and receiving shares worth $16, despite proposing a deal that is bad in expectation. For the sponsor, this $8 expected payoff is a lot better than liquidating and getting nothing. For sponsor and shareholder interests to be aligned, the *ex ante* value of a merger to a sponsor cannot be positive when its value to shareholders is less than the redemption value of the SPAC's shares. But because earnouts reward sponsors for mergers that turn out well *ex post*, so long as there is any chance that a SPAC's post-merger shares will rise above a SPAC's threshold, shares subject to an earnout will have positive value to the sponsor *ex ante*. Thus, even if the present value of a merger to shareholders is negative, sponsor shares subject to the best-designed earnout will have a positive value at the time of a merger – and hence, a value to the sponsor that is higher than the zero value of a liquidation.

A well-structured earnout can, however, reduce the misalignment when combined with a large investment by the sponsor at the time of the merger—though it cannot eliminate it. To illustrate this, suppose that a sponsor receives a promote subject to an earnout that will be worth $10 million in a merger worth $10.00 per share. Suppose the sponsor also makes an investment of $10 million concurrently with the merger, buying new shares for $10.00 each. If the sponsor proposes a merger that is worth $6.00 per share, it will lose $4 million on its $10 million investment. If the earnout were stringent enough to reduce the *ex ante* value of the sponsor's promote by more than 60%, so that the promote is worth less than $4 million to the sponsor, then merger would be worth less than zero to the sponsor, and the sponsor would reject it. Thus, in principle, a well-structured earnout combined with a large sponsor investment can deter a sponsor from proposing a seriously bad deal.

Even with a sponsor investment, however, an earnout cannot ensure that a sponsor will reject all deals that are bad for SPAC shareholders. We show that, with an investment of reasonably plausible size, a well-structured earnout can induce a sponsor to reject a merger worth less than $6.50 per share. If sponsors are willing to invest more, or reduce the size of their promote, that figure can rise to $7.50 or possibly $8.00 per share. This would represent a marked improvement over current SPAC practice, where sponsors have incentives to propose mergers worth far less than $8.00 per share. But it still leaves sponsors favoring many deals that will be bad for SPAC shareholders.

A well-structured earnout coupled with an investment by a sponsor can also reduce the dilution caused by the sponsor's promote—though it cannot eliminate dilution. The investment at $10.00 per share increases the number of shares that bear the cost of the promote and hence reduces the per-share cost of the promote. An earnout that promises to cancel sponsor shares in significant numbers with significant probability would similarly mitigate dilution. Alignment of sponsor interest and cost reduction thus go hand in hand and require both a substantial investment and an earnout with a substantial likelihood of canceling shares.

In contrast to the hypothetical earnout above, the earnouts that SPACs actually adopt have a minimal impact on the *ex ante* value of sponsor promotes and are therefore ineffective at aligning sponsor and shareholder interests and in reducing SPAC costs. The biggest flaw in current earnouts is the long time frames they allow for meeting price thresholds – often five-years or more. Just as an out-of-the-money option is more likely to pay off the longer its term, so too is an earnout. Thus, even if a sponsor makes an investment at the time of a merger in an amount equal to its promote, and even if the sponsor subjects its entire promote to an earnout, we show below that most earnouts that have actually been adopted will deter a sponsor from proposing a merger only if the merger is worth less than $5.50 per share. A merger worth more than that will provide a positive payoff to the sponsor under the terms of current earnouts. Because the earnouts that SPACs currently adopt do so little to reduce the *ex ante* value of sponsor promotes, earnouts have almost no impact on SPAC dilution costs. Using a derivatives pricing methodology, we find that promote shares subject to typical sponsor earnouts are worth only about 10% less than promote shares not subject to an earnout. Furthermore, while shares subject to an earnout lose value if a sponsor proposes a merger worth less than $10 per share, the value they lose is only slightly greater than what they would lose with promote shares not subject to an earnout.

The fact that even the best earnout has a limited impact on sponsor interests, and that current earnouts fall far short, is not reflected in the descriptions that SPACs provide in their investor presentations and proxy statements. In some cases, SPACs explicitly claim that earnouts align sponsor and shareholder interests,[20] and in other cases, they simply describe an earnout's

[20] *See, e.g.,* Fortress Value Acquisition Corp. II, Definitive Proxy Statement (Form DEF14A) at slide 5 of investor presentation (Feb. 22, 2021) (arguing that due to an earnout and a sponsor PIPE investment, sponsor incentives are "fully aligned," with SPAC shareholders).

mechanics. But, by omission, even the latter descriptions imply that the earnout accomplishes more than it actually does. Disclosure of earnouts fall short of the SEC's mandate that they "clearly describe the conflicts of interest that result from sponsors'. . . compensation arrangements . . . that may create financial incentives to complete a business combination transaction even if the transaction may not be in the best interest of other shareholders."[21] We propose a more complete disclosure of the economics of an earnout and specifically the extent to which sponsor and shareholder interests remain misaligned with respect to the decision to enter into a merger.

We further discuss how earnouts can be accurately accounted for when disclosing SPAC costs. As we explain elsewhere, clearly conveying SPAC costs to investors is among the most pressing regulatory issues facing the SEC as it considers disclosure obligations of SPACs.[22] SEC Chairman Gary Gensler has likewise noted that "retail investors may not be getting adequate information about how their shares can be diluted throughout the various stages of a SPAC," and called for SEC staff for recommendations "about how investors might be better informed about the fees, … dilution, and conflicts that may exist during all stages of SPACs."[23] We show that this will only be possible if the SEC adopts improved disclosure requirements on earnouts.

In Part I, we describe earnouts and address the claim that they are a new innovation by comparing earnouts in SPAC mergers from 2010 through 2016 with earnouts in mergers from January 2021 through June 2021. In Part II, we examine earnouts from an a priori perspective, addressing the plausibility of claims that they align sponsor and shareholder interests and reduce the dilution caused by sponsor promotes. In Part III, we show that earnouts, as currently structured, fail entirely to perform those roles. In Part IV, we consider whether it is possible for earnouts to fully align the interests of sponsors and shareholders and reduce dilution. We conclude that they cannot, but that when combined with a large investment by the sponsor, a well-designed earnout can improve the alignment and deter sponsors from pursuing seriously bad mergers. In addition, a large investment and a well-designed earnout reduce dilution. In Part V,

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[21] Division of Corporation Finance, *Special Purpose Acquisition Companies CF Disclosure Guidance No. 11*, SEC. & EXCHANGE COMM. (Dec. 22, 2020), https://www.sec.gov/corpfin/disclosure-special-purpose-acquisition-companies.

[22] Michael Klausner and Michael Ohlrogge, *SPAC Disclosure of Net Cash per Share*, available.

[23] Speech of Gary Gensler, Chairman, U.S. Securities Exchange Commission, Remarks Before the Healthy Markets Association Conference, Washington D.C. (Dec. 9, 2021), https://www.sec.gov/news/speech/gensler-healthy-markets-association-conference-120921.

we address the misleading ways in which SPACs describe earnouts in their SEC filings, and we propose a framework for the SEC to use in mandating accurate disclosure.

I. Sponsor Earnouts: Description and Background

Prior to taking a SPAC public in an IPO, a sponsor typically receives at a nominal price, a "promote" consisting of shares that will amount to 20% of the SPAC's post-IPO equity. In addition, concurrently with the SPAC's IPO, sponsors typically purchase warrants and/or shares at roughly market prices. The proceeds of the sponsor's investment cover the SPAC's underwriting fees and other expenses that the SPAC incurs between the time of its IPO and its eventual merger. By taking 20% of the SPAC's equity essentially for free, the sponsor typically can come out far ahead on its investment so long as the SPAC eventually finds a merger target and closes the merger. Even if the SPAC's share price drops by 70% or more following its merger, the sponsor will come out ahead. On the other hand, if the SPAC fails to merge, it must liquidate, in which case the sponsor's promote will be worth nothing, and the sponsor will lose its initial investment.

There is thus an inherent conflict built into the SPAC structure between the interests of a sponsor and the interests of SPAC shareholders. The problem is not that sponsors do not care about getting a good deal. They certainly want a good deal if they can find one. The problem is that for a great many sponsors, the best deal they can find will not be good for SPAC shareholders. We have shown in other work that over the past decade, mean and median returns to SPAC shareholders are systematically bad, and we have explained that these poor returns stem from dilution inherent in the SPAC structure.[24] The challenge, therefore, is to induce the sponsor, *when it has failed to find a good deal*, to allow the SPAC to liquidate rather than propose a deal that is bad for SPAC shareholders. Unlike other settings, such as executive compensation,[25] the

[24] We show that SPACs are expensive vehicles that generally deliver around $6.00 in cash for each share they hold pre-merger, and few sponsors are able to find a target company to agree to a merger that gives SPAC shareholders shares worth at least $10 in exchange for so little cash. *See* Michael Klausner, Michael Ohlrogge and Emily Ruan, *A Sober Look at SPACs*, 39 YALE J. ON REG. 228 (2022). *See also* Figure 4**Error! Reference source not found.** below.

[25] In executive compensation, "performance vesting" (p-v) shares or options are the functional equivalents to earnouts: they grant executives stocks or options only on the condition that certain targets based either on share prices or accounting measures are met. Such vesting conditions have become common in executive compensation. In that setting, however, the goal is to incentivize an executive to work hard and to take sufficient risks. The goal is not to incentivize the executive to liquidate the corporation if they cannot find sufficiently good strategies to pursue.

challenge in designing sponsor compensation is not to induce the sponsor to work harder. It is to induce the sponsor to *stop* working when it is in the shareholders' interest for the SPAC to liquidate.

Some sponsors attempt to address this structural conflict by adopting an earnout under which the sponsor agrees to forfeit some of its shares unless the share price of the post-merger company meets one or more price thresholds within a specified time. Occasionally, the sponsor adopts the earnout at the time of its IPO.[26] Much more commonly, it adopts the earnout concurrently with its merger.

The adoption of earnouts has led some commentators and SPAC promoters to claim that SPACs are at the "beginning of innovation."[27] In the telling of many commentators, earnouts have recently emerged in response to criticism leveled at the poor alignment of sponsor and shareholder interests.[28] To investigate whether earnouts are in fact a recent phenomenon, we review all SPACs that merged between 2010 and July 2016. We find that 15 of the 35 SPACs (43%) that merged during that period had earnouts. Among SPACs that merged between January and June 2021, 21 out of 64 (33%) had sponsor earnouts.[29] Moreover, the terms of these recent earnouts were substantially similar to those of the 2010 to 2016 SPACs. The claim that earnouts are a new innovation is thus incorrect.

Among SPACs that merged between January and June 2021 and that included sponsor earnouts, a mean of 41% and a median of 30% of the shares the sponsor took as a promote were

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For more details, *see* Bettis, J. Carr, et al., *Performance-vesting provisions in executive compensation*, 66.1 J. ACCT. & ECON. 194-221(2018).

[26] *See, e.g.,* TPB Acquisition Corporation I, Prospectus (Form 424B) (Aug. 12, 2021).

[27] Tom Zanki, *Blank-Check Sponsors Get Creative in Crowded Market*, LAW 360 (Sep. 28, 2020), https://www.law360.com/articles/1312574/blank-check-sponsors-get-creative-in-crowded-market.

[28] For instance, a recent publication by Nasdaq argues that "Early SPACS were often structured in a manner that ensured sponsors and founding investors received generous payouts whether they made a good deal or not... In recent years, a new breed of SPAC sponsors is working to … structur[e] offerings in a manner that better aligns the interests of all investors…. Ideally, founder shares are issued on a vesting schedule tied to stock price." *Role of an Exchange: Five Key Questions to Consider About SPACs*, NASDAQ (Apr. 12, 2021), https://www.nasdaq.com/articles/role-of-an-exchange%3A-five-key-questions-to-consider-about-spacs-2021-04-12. *See also* Yun Li, *SPACs break 2020 record in just 3 months, but the red-hot industry faces challenges ahead*, CNBC (Mar. 19, 2021) ("To prove that the market is not just a cautionary tale on Wall Street, SPACs are evolving their structure to become more investor friendly and reduce the outsized benefit for sponsors."). Similarly, *see* Zanki, *supra* note **Error! Bookmark not defined.**, citing earnouts as an example of how sponsors "have begun to veer f rom well-worn paths."

[29] Gahng et. al document a modest reduction in the prevalence of sponsor earnouts between 2017 and 2020. *See* Minmo Ghang, Jay R. Ritter & Donghang Zhang, *SPACs*, J. Fin. Econ. (forthcoming in 2022).

subject to the earnout.[30] Thus, even where there is an earnout, sponsors almost always hold a large fraction of their promote outright.[31] Earnouts vary with respect to the share price threshold(s) a post-merger company must meet for shares to be released to the sponsor. In the most common form of earnout, one half of the earnout shares covered will be released to the sponsor if the SPAC's post-merger share price reaches $12.50, and the other half will be released if the share price reaches $15.00. Only four of the 21 SPACs that merged during this period had a price threshold above $15, and for three of those four, the above-$15 threshold covered only 1/3 of the earnout shares. Most earnouts allow either five or more years following the SPAC merger for these thresholds to be met,[32] after which any shares not yet earned are cancelled.[33] The mean time to achieve price targets in our sample is 5.8 years.

II. The A Priori Rationale for Sponsor Earnouts

SPAC sponsors, bankers, lawyers and commentators cite two primary rationales for subjecting a sponsor's promote to an earnout. First, sponsor earnouts are said to align the interests of sponsors and shareholders in entering into a merger. Second, they are said to reduce the dilution resulting from the sponsor's promote. Each of these rationales is questionable, from an a priori perspective, and merits at least some refinement before proceeding to a quantitative analysis.

A. Alignment of Interests in Entering into a Merger

The most commonly expressed rationale for a sponsor earnout is that it aligns sponsors' interests with the interests of shareholders. Typically, what commentators have in mind is that an

[30] These percentages of promote shares subject to earnouts are computed after accounting for cancellations of sponsor shares negotiated at the time of SPAC mergers.

[31] Only two SPACs subjected essentially all of the promote shares to an earnout. One other SPAC subjected 77% of the promote to an earnout, and three other SPACs subjected between 50% and 60% of the promote shares to an earnout. All other earnouts covered 40% or fewer of the promote shares.

[32] One SPAC allowed seven years to meet a $15 requirement, and another allowed 10 years to meet an $13.50 requirement. Only three SPACs allowed periods of less than five years to meet their earnout thresholds. Of these, one SPAC allowed three, four, and five years to meet its three post-merger price thresholds. Another SPAC allowed one, two, and three years to meet its price thresholds. The final SPAC had a non-price earnout criteria (relating to FDA approval of a drug) with 1.6 years allowed to meet that.

[33] Some sponsor agreements specify that a sponsor will not be able to transfer its shares until the earlier of a certain number of years post-merger, or the achievement of a certain post-merger price target. Because these agreements do not subject shares to cancellation in the event the price target is not met, we do not consider them earnouts. We briefly analyze such agreements in Part IV of this paper, after presenting our main analyses on earnouts.

earnout provides a sponsor with an incentive to locate a target and negotiate a merger that will be value-enhancing to shareholders.[34] For instance, an editorial in Barron's asserts that earnouts ensure that "there's no incentive for sponsors to just get any deal done."[35] Daniele D'Alvia of Queen Mary University, a prominent commentator or SPACs in Europe, describes earnouts as part of a "virtuous promote scheme" that is "able to connect the sponsor compensation directly to performance much like a management incentive program does."[36] Most optimistically, SPAC Research, a SPAC industry focused website and data provider, argues that sponsor earnouts "align everybody's incentives."[37]

From the perspective of SPAC shareholders, an alignment of sponsor interests means that a sponsor's proposal of a merger can be trusted as reflecting the sponsor's judgment that the merger is value enhancing. Earnouts are thus viewed as conveying a credible signal that a proposed merger is a good one for shareholders. An article in Law360 reflects this perspective, describing earnouts in terms of sponsors "negotiat[ing] their paydays in order to demonstrate to shareholders that they are committed to investors' success as well as their own."[38]

More important than commentators' statements in support of earnouts are the statements SPACs themselves make. In their pitches to investors, SPACs and their sponsors describe earnouts as aligning their interests with those of shareholders. For example, in its press release announcing its merger, Fortress Value Acquisition Corp. II stated that it "has amended the terms of its founder equity to align with long-term value creation and performance of the Company."[39] Then in its investor presentation, there is a slide with the heading "Long-Term Alignment of Interests: SPAC Sponsor 'Promote' Restructured as 'Earn-Out.'"[40] And in its investor call,

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[34] Another rationale for earnouts is that they create value by inducing the sponsor to remain productively engaged with the post-merger company. This claim is also problematic. First, an unencumbered promote already provides this incentive. It seems unlikely that an earnout will have an impact on the margin. In the interest of brevity, therefore, for the remainder of this paper we do not address earnouts as related to sponsors' post-merger incentives. Nevertheless, a straightforward extension of the empirical methods we use to evaluate earnouts would reveal that earnouts as currently structured are also ineffective at improving post-merger incentives.

[35] Nicholas Jasinski, *This SPAC Is Aligned with Shareholders. It's Merging with a Nuclear Services Firm,* BARRON'S (Jul. 11, 2021), https://www.barrons.com/articles/gs-acquisition-holdings-space-51626041014.

[36] Daniele D'Alvia, *Dulcis in fundo: A Re-thinking of SPACs, and the SPACs' Promote*, FORDHAM J. OF CORP. & FIN. L. (2021), https://news.law.fordham.edu/jcfl/2021/03/10/dulcis-in-fundo-a-re-thinking-of-spacs-and-the-spacs-promote/.

[37] *Sponsor Concessions*, SPAC RES. NEWSL. (Aug. 10, 2020), https://www.spacresearch.com/newsletter?date=2020-08-10.

[38] Tom Zanki, *Blank-Check Sponsors Get Creative in Crowded Market*, LAW360 (Sep. 28, 2020), https://www.law360.com/articles/1312574/blank-check-sponsors-get-creative-in-crowded-market.

[39] Fortress Value Acquisition Corp. II, Current Report (Form 8-K), Exhibit 99.1 at 1 (Feb. 22, 2021).

[40] *Id.*, Exhibit 99.2 at 33.

management of this SPAC stated that the earnout "is incredibly important and sets us up for success over the long-term, and is a sign of our confidence."[41] (The post-merger value of this SPAC is down 66% since its merger as of January 2022.) Similarly, in its litigation in the Delaware Chancery Court, Churchill's sponsor argued that its earnout, which provided for a $12.50 threshold and a five-year term, "align[ed] Mr. Klein's personal financial interests with the long-term interests of Churchill's other shareholders."[42] (This SPAC is down 60% since its merger as of January 2022.)

The view of earnouts as aligning sponsor and shareholder interests appears reasonable on the surface, but upon analysis, there is reason for serious doubt. First, and most simply, earnouts are typically adopted at the time a merger is negotiated. For an earnout to influence sponsor incentives, the earnout must be in place before the sponsor negotiates the deal.[43] Only a few SPACs have adopted earnouts at the time of their IPO.[44]

Second, the sponsor's promote itself – without an earnout – rewards a sponsor for consummating a value-enhancing merger, and the better the deal is for SPAC shareholders, the larger the reward to the sponsor. The warrants and/or shares that the sponsor purchases concurrently with the IPO provide yet more reward. As we have explained above, sponsors' and shareholders' interests are not misaligned with respect to the choice between a good merger and a better merger. They are misaligned with respect to the decision to liquidate rather than enter into a value-decreasing merger. An earnout has no impact on that decision. It may reduce what a sponsor expects to receive from a bad merger, but without more, it will not result in a negative expected value for a sponsor. So, from the perspective of aligning sponsor and shareholder interests, an earnout alone is ineffective.

To reduce the sponsor's incentive to choose a bad merger over liquidation, the sponsor must have some additional motivation *not* to propose the merger. The way to achieve this is for the earnout to be in place at the time of the SPAC's IPO and for the sponsor to pre-commit to

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[41] *Id.*, Exhibit 99.3 at 2. *See also* One, Prospectus (Form 424B3) at 118 (Jun. 24, 2021) ("50% of the Sponsor's shares in the post-closing company would be subject to vesting triggers … in order to further align its interests with AONE's public shareholders.") *See also* Sandbridge Acquisition Corporation, Prospectus (Form 424B3) at 98 (Jun. 21, 2021) (arguing that the merger agreement contains "a sponsor earn-out to better align shareholder interests.")

[42] Opening Brief in Support of Defendants' Motion to Dismiss at 32, In re Multiplan Corp. Stockholders Litig., C.A. No. 2021-0300-LWW (Del. Ch. Jan. 3, 2022).

[43] In theory, an earnout could also influence sponsor incentives if the sponsor anticipated in advance with sufficient specificity the details of an earnout they would likely be forced to accept as part of a merger deal.

[44] *See supra* note 16.

make a large investment in a SPAC's eventual merger at a price at least equal to the redemption price (which for convenience, we will assume to be $10 per share). Some, but not many, SPAC sponsors make such commitments at the time of their IPO.[45]

For a combination of a sponsor's pre-commitment to an investment and an earnout to be effective in aligning sponsor and shareholder interests, they would have to put the sponsor in the position of a shareholder – choosing to go forward with a merger only if the merger is worth more than $10 per share. Consider, for example, a SPAC in which the sponsor has 100 promote shares. The sponsor is considering a merger and, at the time of its IPO had committed to invest $1,000 for an additional 100 shares at $10 per share if and when the SPAC merges. Focusing only on the sponsor's promote and this investment commitment, so long as the merger is worth more than $5 per share, this merger will be better for the sponsor than a liquidation. For shareholders, however, a merger worth less than $10 per share would be a bad deal. Considering the fact that the sponsor will have also made an investment in warrants and/or shares at the time of the IPO, and that this investment will be lost in a liquidation, the sponsor will favor a merger worth even less than $5. Thus, without an earnout, a sponsor commitment to invest at $10 per share when a SPAC merges can never fully align a sponsor's interest with the interests of shareholders.

Suppose, however, there is also what we will call a "perfect earnout" that would cancel all the sponsor's shares and warrants if the SPAC enters into a merger worth less than $10 per share. This earnout, coupled with the sponsor's commitment to purchase new shares for $10 each, would lead the sponsor to prefer liquidation over a merger worth less than $10 per share. If the SPAC entered into a merger worth less than $10, the sponsor would lose its 100 promote shares entirely, and it would lose money on the 100 shares it would be committed to buy at the time of the merger.

As we will show below, however, typical earnouts do not come close to canceling all sponsor shares, let alone all sponsor shares and warrants, if a SPAC enters into a value-decreasing merger. In fact, we show that because of the option-like nature of earnouts, even the best structured earnout can only partially reduce the value of promote shares if a sponsor

[45] It is questionable whether such a commitment is enforceable, but we assume that if a sponsor failed to follow through on such a commitment, even if there is no legal consequence, the signal that would be sent to the market would kill the merger.

proposes a bad merger. Nevertheless, a large enough sponsor investment, coupled with a well-structured earnout, will deter a sponsor from entering into seriously bad mergers. This is all we can expect from earnouts, but it would still be a major improvement over the status quo.[46]

One might wonder whether a pre-commitment to an investment and an earnout might induce a sponsor to continue searching for a deal that is good for shareholders rather than proposing a deal that is not (assuming the SPAC has time to do so). As we show in the Appendix, there is little to no reason to expect an imperfect real-world earnout to lead to better deals for shareholders.

B. Reduction of SPAC Dilution Costs

The second rationale cited for an earnout is that the prospect of a sponsor forfeiting shares reduces the dilution overhanging a SPAC, the cost of which is generally borne by SPAC shareholders.[47] A recent publication by the law firm Skadden Arps describes earnouts as a "response" to the "view that de-SPAC transactions can be more expensive … than a traditional IPO."[48] Similarly, a publication by Goldman Sachs notes that while the base level of the SPAC sponsor's promote (coupled with SPAC warrants) can render SPACs more expensive than IPOs, if sponsors subject some of their promote to earnouts, then a "SPAC may actually look on par or less expensive than the traditional IPO."[49] SPAC sponsors make similar representations in their pitches to investors. For instance, in a presentation to investors filed with the SEC, Acamar Partners presented a diagram of post-merger ownership of the target company that treated

[46] In theory, an earnout coupled with a sponsor investment at $10 per share might be sufficient to more fully align sponsor and shareholder interests if a sponsor believes it would face reputational harm from proposing a bad merger. But it is not clear how much, if any, reputational damage sponsors suffer from bad mergers. At least from an ex post perspective, bad mergers are common, and liquidations are rare. Moreover, many sponsors have completed mergers that performed quite poorly, only to subsequently launch many other SPACs. A liquidation may actually be worse for a sponsor's reputation than a bad merger. Liquidation renders a SPAC's warrants worthless, making it harder to attract new IPO-stage investors who make their profits from SPAC warrants. Finally, while some sponsors may have such strong reputational interests that they would refuse to propose a bad merger, for these, an earnout would seem unnecessary in the first place.

[47] For an analysis of dilution and other costs built into SPACs, *see* Michael Klausner, Michael Ohlrogge and Emily Ruan, *A Sober Look at SPACs*, 39 YALE J. ON REG. 228 (2022).

[48] *The Year of the SPAC,* SKADDEN (Jan. 26, 2021), https://www.skadden.com/insights/publications/2021/01/2021-insights/corporate/the-year-of-the-spac.

[49] GOLDMAN SACHS, THE IPO SPAC-TACLE (Jan. 28, 2021), https://www.goldmansachs.com/insights/pages/top-of-mind/the-ipo-spac-tacle/report.pdf.

sponsor shares subject to an earnout as being essentially non-existent, despite never giving any clear indication to investors that this was the basis for the computations.[50]

In earlier work, we found that, after taking account of sponsors' promotes and other sources of dilution, SPACs have far less cash per share than the $10 that shareholders would receive if they redeem their shares. We also found that merger targets tend to negotiate deals that leave SPAC shareholders bearing the cost of that dilution.[51] Consequently, if an earnout reduces the value of a sponsor's promote, it would reduce dilution and increase the post-merger value of a SPAC's public shares.

If a sponsor wanted simply to reduce SPAC costs, however, it would reduce the size of its promote outright. The cost reduction achieved by an earnout, by contrast, is indirect and difficult to quantify. Nevertheless, a well-structured earnout could be a way to reduce dilution while still providing a sponsor with the same ability to profit from a good merger, if it can find one. For a PIPE investor seeking to negotiate a reduction in dilution attributable to the sponsor's promote, an earnout may thus be a compromise to which a sponsor would more readily agree than an outright forfeiture of shares. If sponsors are more confident than PIPE investors about a merger's prospects, then the sponsor will believe it is giving up less than the PIPE investors believe they are gaining. Target companies may also push for sponsor earnouts in negotiations with sponsors. Yet, if the SPAC sponsor believes it is giving up less by accepting an earnout than the target's owners believe the sponsor is giving up, then this indicates that the sponsor is more optimistic about the value of the target than the target's own owners are. That would not a good sign from the perspective of nonredeeming SPAC shareholders, or even the sponsor.[52]

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[50] *See* Acamar Partners, Current Report (Form 8-K) at 44 (Nov. 17, 2020). *See also* FinServ Acquisition Corp., Current Report (Form 8-K) (Dec. 18, 2020) and Crescent Acquisition Corporation, Current Report (Form 8-K) (Jun. 24, 2020).

[51] Michael Klausner, Michael Ohlrogge and Emily Ruan, *A Sober Look at SPACs*, 39 YALE J. ON REG. 228 (2022).

[52] An earnout may appear to be an appealing way to reduce a SPAC's costs by ensuring that the promote only is paid out if the target company performs well post-merger, in which case SPAC shareholders and target shareholders will be wealthier and perhaps less concerned with value going to the SPAC sponsor. On its surface, this may point to an insurance-like aspect of earnouts. In bad states of the world, where the post-merger firm is performing poorly, the earnout cancels some of the sponsor's shares, leaving other shareholders with a larger (and more valuable) slice of the company's ownership. In good states of the world, where the post-merger firm has performed well, there is more value that can be shared with the SPAC's sponsor while still leaving other investors with an attractive return. Yet, shares subject to earnouts typically cover only a few percent of the total post-merger equity of firms SPACs take public. Thus, ex-post, whether those shares are cancelled or not will have only a very marginal impact on the value of other shares. Buying insurance for 3% of the value of one's home is not very useful. Thus, it is hard to justify sponsor earnouts as an insurance-like tool, at least from a purely rational-economic perspective. Nevertheless, there may be an intuitive fairness appeal to earnouts. Even if earnouts do not reduce costs or improve sponsor incentives enough to actually improve SPAC performance, earnouts may make some participants in SPAC

C. The Bottom Line: Rationales for Sponsor Earnouts

The claim that an earnout aligns the interests of SPAC sponsors and shareholders does not withstand scrutiny with respect to earnouts standing alone. But in combination with a sponsor investment of sufficient size and price, a well-structured earnout can, in principle, align interests. To have such an effect, the earnout would have to substantially reduce the present value of a sponsor's promote in the event of a value-decreasing merger. The less an earnout does so, the larger the sponsor's investment must be in order to align its interests with shareholder interests. Even a combination of a well-structured earnout and a substantial sponsor investment, however, will only align interests with respect to seriously bad mergers. A sponsor would still have an incentive to enter into a merger that is somewhat of a losing deal for shareholders. A well-structured earnout would also reduce the dilutive impact of a sponsor's promote, but there too, only to a degree. The problems inherent in the SPAC structure remain. In Part III, we investigate the extent to which the actual terms of earnouts, as opposed to hypothetically well-structured earnouts, are effective with respect to alignment of interests and reduction in dilution.

III. Ineffectiveness of Earnouts as Currently Structured

In this Part, we show that earnouts as typically structured have a minimal impact on the present value of a sponsor's compensation when a SPAC enters into a merger that is a losing proposition for its shareholders. As a result, they are ineffective even if coupled with a large sponsor investment.

A. Lack of Market Adjustment and High Volatility

On the surface, a typical earnout may appear to dramatically reduce the value of the sponsor's compensation when a SPAC enters into a merger that is a losing deal for shareholders. After all, the earnout will cancel a sponsor's shares unless post-merger share prices rise to specified threshold of, say, $12.50 or $15.00 within five years of the merger. In fact, however, earnouts such as this do little to reduce sponsor compensation, even for bad mergers. First,

transactions feel better about either the good or bad performance that occurs because earnouts seem to be fairly rewarding sponsors for good outcomes and not for bad ones.

earnout price thresholds are not adjusted for changes in market prices. Particularly during periods when markets perform strongly, as they have for the past decade, there is a high likelihood that the earnout will allow a sponsor to regain all the shares in its promote even if a merger substantially underperforms the market. Second, earnouts allow for a long period of time in which a company's share price can meet a threshold. Because post-merger SPACs' share prices are highly volatile, many SPACs that enter into mergers that are bad deals for shareholders *ex ante* will nonetheless pay out for their sponsors by chance – regardless of whether the market is rising or falling.

Earnouts' failure to adjust thresholds for market returns can often allow a sponsor to collect its promote even if a SPAC's performance is poor relative to the market. Over the past decade, the average annual returns of the Nasdaq market index, for instance, have been 17.4%.[53] Ten dollars invested at a 17.4% annual growth rate and compounded over 5 years will grow to roughly $23. A company could thus grow at a half the rate of the Nasdaq and still easily exceed the price thresholds of most earnouts.

The post-merger price performance of actual SPACs bears this out. Table 1 examines SPACs that merged between January 2010 and July 2016, and thus have at least a full five years of post-merger share price performance to observe.[54] We examine how many of these SPACs would have met each of four earnout thresholds within five years, and how those firms performed relative to the market over the five years following each merger.[55] Not all SPACs met these thresholds, but for those that did, mean performance was substantially below market– for example, a negative excess return of 88% for the 11 companies that hit the $17.50 threshold.[56]

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[53] The geometric average returns for the S&P 500 and Russell 2000 have been 12.4% and 11.3%, respectively. A ten-dollar investment at these rates would grow to $18 and $17, respectively, over five years, in each case easily exceeding the price targets for almost all sponsor earnouts.

[54] As of the date of this writing, this means we examine mergers that were completed through July 2016.

[55] In this analysis, since we are considering a range of hypothetical earnouts for each of these SPACs, each with a different price target, we consider all SPACs with at least 5 years of post-merger history, rather than just the SPACs that actually had earnouts. SPACs with and without earnouts both performed terribly five years post-merger, with those SPACs with earnouts underperforming the Nasdaq by an average of 148% as of five years post-merger, and those without earnouts underperforming the Nasdaq by an average of 173% as of five years post-merger. The presence of an earnout had no statistical significance in predicting these returns.

[56] Another contributor to the poor performance even of those firms that would have satisfied various earnout price targets is that a large number of firms whose stock rose sufficiently high to satisfy the given price targets subsequently saw their share prices fall dramatically. Under efficient market assumptions, a stock that reaches any given price threshold (such as $15.00) should be no more or less likely to subsequently under or overperform against the market than any other stock. Nevertheless, as we document in Klausner, Ohlrogge, and Ruan (2022), *supra* note 12, there is a persistent pattern that share prices of firms that go public through SPAC mergers perform increasingly poorly the more time passes since their mergers.

In other time periods, where market performance is poor, a company could potentially perform quite well relative to the market, yet fail to satisfy earnout price targets, creating a different situation where the earnout fails to accurately reward sponsors that have struck winning deals. The failure to adjust earnout price targets for market performance thus adds a large element of luck to whether a sponsor will be compensated, reducing the extent to which earnouts reward only those deals that are good for SPAC investors.

Table 1: Returns to Historical SPACs that Would Have Satisfied Five-Year Sponsor Earnouts

Earnout Threshold	N SPACs Satisfying	Pct SPACs Satisfying	Mean 5-Yr Return (Excess Nasdaq) for "Successful" SPACs
$12.50	11	31%	-110%
$15.00	5	14%	-98%
$17.50	4	11%	-88%
$20.00	3	9%	-72%

Sample Period: All (35) SPAC mergers from 2010 to July 2016

The second and more fundamental reason earnouts do not reduce the present value of sponsor compensation when a SPAC enters into a losing merger is that share prices of post-merger SPACs are highly volatile. High volatility means that mergers that are worth less than $10 per share at the time of their merger have a high chance of satisfying an earnout's price targets – regardless of whether they are adjusted for market returns. High volatility also means that shares cancelled for not meeting an earnout's targets will often be worth little, meaning the earnout offers little incremental improvement over a promote without an earnout.

Consider, for instance, a simplified example in which a SPAC has an earnout with a single threshold of $15.00, and its sponsor is considering a merger with a 50/50 chance of being worth either $0.00 or $16.00 by the end of the earnout period. Leaving aside the time value of money and risk premia,[57] the value of the merger is $8 per share, which if the market is efficient will be reflected in the company's share price immediately after the merger. Nonetheless, an

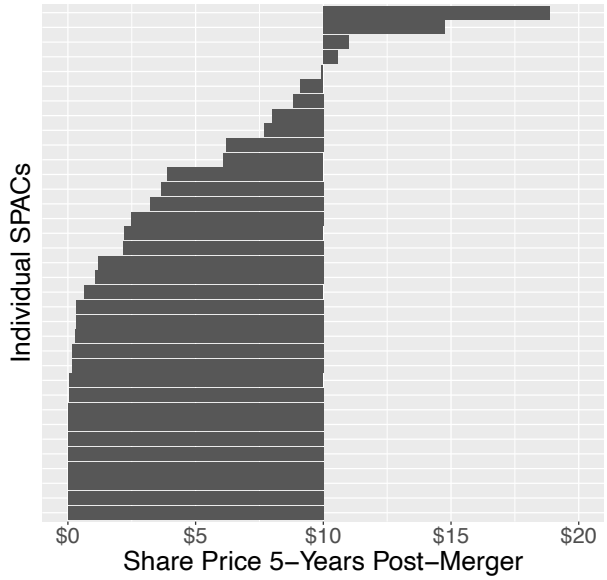
[57] All of the conclusions of this analysis would remain the same if these factors were incorporated.

earnout with a $15.00 threshold has a 50/50 chance of paying out for the sponsor – a better outcome than a liquidation despite the fact that the merger is a losing proposition for the shareholders. In fact, this earnout has no impact on a sponsor's promote.

Although this example is stylized, it illustrates the point that higher volatility results in lower effectiveness for earnouts. Furthermore, the numbers chosen here are not far off the actual distribution of long-term SPAC outcomes. Figure 1 plots the distribution of share prices five years post-merger for the 35 SPACs that merged between 2010 and 2016.[58] By five years following their mergers, a few of these had done well, most had lost all or almost all their value, and a few were somewhere in the middle. Furthermore, among the SPACs whose share prices landed lower than $12.50 or $15.00, some would have paid out because their share prices rose above those levels earlier for sufficient lengths of time. In practice then, as in the stylized example, most SPACs would either satisfy an earnout's price targets or cancel shares that were worth little or nothing. For instance, among the SPACs in Figure 1, the average value of shares that would have been cancelled for not meeting a 5-year, $15.00 price target is $2.76, and the average value of shares that would have been cancelled for not meeting a 5-year, $12.50 price target is $1.69. Although we do not know whether newer SPACs will display precisely this same pattern of long-term price performance, we show in the Appendix that the long-term outcomes for firms that go public through traditional IPOs follow a pattern similar to the all-or-nothing outcomes that typify post-merger SPACs and that render earnouts ineffective.

[58] Some companies in the sample, after experiencing steep price declines, conducted reverse stock splits. The share prices reflected here remove the effect of those. For instance, if a company engaged in a 1-for-10 reverse stock split and its current share price is $1.00, we record its current share price on this plot as $0.10.

Figure 1: Distribution of Share Prices 5-Years Post-Merger



B. An Empirical Analysis of Earnouts' Impact on Sponsor Compensation

The analysis in Section A suggests that earnouts will have little impact on the present value of a sponsor's compensation when a SPAC enters into a value-decreasing merger. Table 1 shows that, from an *ex post* perspective five years after a merger, it certainly appears as though earnouts would have paid out in some bad mergers. But in order to determine the effectiveness of earnouts in aligning sponsor and shareholder interests, we must analyze the influence of earnouts on the *ex ante* value of an earnout to the sponsor. That is, does the earnout make a merger that is value-decreasing *in expectation* unattractive to a sponsor? Or, at least, does an earnout tie value of a sponsor's compensation to the value that shareholders *expect* to reap from the merger?[59]

Answering these questions is a challenge because we cannot observe the *ex ante* value of a merger. A premise of SPACs using multi-year earnouts is that the market is unlikely to price a merger accurately on the day of the merger. If the share price on the day of the merger were an accurate measure of the post-merger company's value, there would be no reason to compensate a sponsor based on share prices over the following several years. As we show in Section IV.A

[59] As we explain in Part II, simply rewarding sponsors in the event that a merger performs well *ex post* leaves open a large set of mergers that are bad in expectation for SPAC shareholders but that can still be very profitable for SPAC sponsors, even when subject to an earnout.

below, a share price on the day of a merger is, in fact, a poor measure of the value of the merged company.

In this section, therefore, we use a simulation approach to quantify the extent to which the present value of sponsor compensation declines with mergers that are of successively low value *ex ante*. Our methodology is similar to the method that post-merger SPACs themselves use to value sponsor earnouts in their post-merger SEC filings.[60]

Promote shares that are subject to cancellation unless a company's shares meet post-merger price thresholds can be analyzed as a type of derivative security often referred to as "barrier" instruments.[61] Their value depends on the share price of the post-merger combined company. We can therefore use derivative pricing methodology to quantify the extent to which earnouts reduce the present value of a sponsor's compensation when the sponsor proposes a merger worth less than $10 per share. This methodology takes into account both the fact that earnout targets are not adjusted for market returns and the fact that post-merger share prices are highly volatile. We will use the term "Earnout Shares," to refer to shares subject to an earnout, and will evaluate them in relation to shares unencumbered by an earnout. We find that under the terms typical for earnouts, the present value of Earnout Shares as of the time of a merger is worth almost as much as shares not subject to an earnout. They do lose value when sponsors propose mergers worth less than $10, but they lose only slightly more than shares not subject to earnouts. Consequently, we find that earnouts have little impact on sponsor compensation.

In order to value Earnout Shares, we use a standard, flexible approach for derivative valuation based on Monte-Carlo simulation.[62] We use the current five-year annual rate of interest

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[60] See for instance, Origin Materials, Inc., Prospectus (Form 424B3) (Aug. 16, 2021), noting "earnout liability was fair valued using a monte carlo open-ended model. The inputs used for the model were a dividend yield of 0%, volatility of 63%, and interest rate of 0.87%." The precise details of models that companies use are rarely disclosed, so we cannot say with certainty exactly how close our methods are to those used by any given firm, but the basic method is the same.

[61] One type of barrier instrument is called a "knock-out" instrument – it will pay out $0 to the holder in the event that the reference security crosses a given price barrier. Another type of instrument is called a "knock-in" instrument – it will pay out $0 to the holder *unless* the reference security crosses a given price barrier. Earnout Shares would thus qualify as a type of "knock-in" instrument. Furthermore, Earnout Shares would be seen as a type of "Parisian option," because they generally require that the given barrier be crossed for a certain period of time, rather than just once, which is typical for more general barrier instruments. For a detailed treatment on pricing Parisian options, *see* Richard J. Haber, Phillip J. Schönbucher, and Paul Wilmott, *Pricing Parisian Options*, 6.3 *J. DERIV.* 71-79 (1999).

[62] *See, e.g.*, JOHN C. HULL, OPTIONS, FUTURES, AND OTHER DERIVATIVES §20.6, at 446 (8th ed. 2012). In particular, we presume that the underlying stock price follows a geometric Brownian motion. We model a transformed version of the process as $dS_t = rS_t dt + \sigma S_t dZ_t$. We simulate daily log returns for that stock price process. The payout on the sponsor shares at the end of a given number of years will equal zero if the earnout condition has not been

on Treasury securities of 0.8%. We estimate volatility based on the actual price movements of recent post-merger SPACs, the standard deviation of which is 0.05 for daily log stock returns (roughly 0.80 for annual log returns).[63]

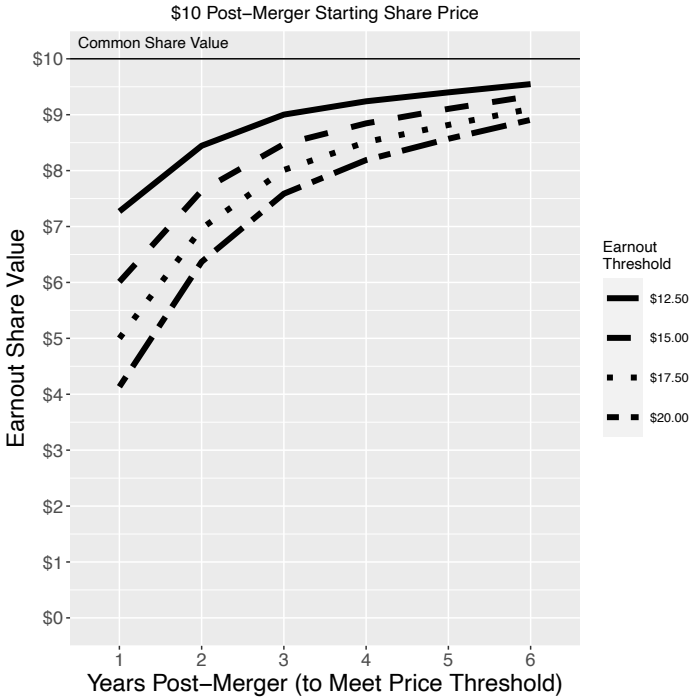
In Figure 2, as a baseline, we begin with a SPAC that we posit to be worth $10 per share immediately after its merger. We consider earnout price thresholds of $12.50, $15.00, $17.50 and $20.00 (indicated by different patterned lines), and earnout durations of one to six years within which the share price must meet each threshold (indicated by the values on the x-axis). As with most earnouts, we require that a price target be met for twenty out of thirty consecutive trading days.

Figure 2 shows that if an earnout allows only one or two years for the underlying shares to meet its price targets, then the present value of Earnout Shares will be significantly less than the value of shares unencumbered by an earnout. At the extreme, the present value of an Earnout Share with a $20 price target and only one year to meet that target is worth roughly $4.00 – compared to $10 for a share not subject to an earnout. As the time limit to satisfy price targets increases, however, the value of Earnout Shares rises rapidly. Moreover, the difference in the present value of Earnout Shares with different price thresholds diminishes. With five years to satisfy a price threshold, for instance, even Earnout Shares with a $20 target are worth close to $9.00 – only 10% less than the $10 value of unencumbered shares. The present value of Earnout Shares with price targets lower than $20 is closer to the $10 value of an unencumbered share.

satisfied, and will equal the end-of-period share price if the earnout condition has been satisfied. We discount these payouts back to present dollars using treasury rates, and measure the earnout shares' value as the expected discounted payout using this transformed model of the stock price process. For simplicity, we presume no dividend payouts, which is typical for a large number of firms following mergers with SPACs.

[63] To arrive at this, we measure the historical post-merger standard deviation of daily log returns for each recent post-merger SPAC. We then compute the mean and median standard deviation by merger-year cohort for each of 2019, 2020, and 2021. Mean post-merger standard deviations are 0.080, 0.075, and 0.052 for 2019, 2020, and 2021, and median post-merger standard deviations are 0.056, 0.056, and 0.047, for 2019, 2020, and 2021. We choose 0.05 as our estimated standard deviation to be conservative, since higher volatilities increase the value of sponsor earnout shares.

Figure 2: Estimated Value of Promote Shares Subject to Earnouts: $10 Starting Price



Holding constant the number of shares subject to an earnout, the present value of an earnout share is important with respect to the impact of the sponsor's promote on dilution. The lower the value of Earnout Shares, the lower the cost imposed on shareholders as a result of dilution. But dilution can be increased or decreased by altering the mix of sponsor shares subject to an earnout and those not subject to an earnout.

The present value of Earnout Shares per se is not important, however, for purposes of aligning sponsor and shareholder interests. For purposes of interest alignment, what matters is how much the present value of sponsor compensation drops for mergers that are worth less than $10 per share to shareholders. Ideally, earnout shares would be worth zero for mergers worth less than $10, but in practice, as we explain, this is not possible. Figure 3 shows the value of earnouts with one-, two-, three- and five-year durations. The hypothetical value of a merger is on the x-axis, and the present value of the sponsor's shares is on the y axis. The value of the Earnout Shares is measured in percentage terms relative to the scenario in which the value of the merger is $10 per share. The red line shows the value of unencumbered shares as the merger value declines – these shares of course lose $1.00, or 10%, for every $1.00 lower the share value is immediately post-merger. The black lines show the present value of shares subject earnout

thresholds of $12.50 and $20. The greater the vertical distance between a black line and the red baseline, the greater the impact of the earnout in reducing the value of a sponsor's compensation below what it would receive from an unencumbered promote. For example, for a one-year earnout, if a SPAC enters into a merger that we posit is worth $7.50 per share, an unencumbered promote share will have lost 25% of its value whereas the present value of an Earnout Share with a threshold of $12.50 will be roughly 45% lower than it would be if the share price immediately post-merger were $10.

Figure 3: Sponsor Compensation Value and Post-Merger Share Value

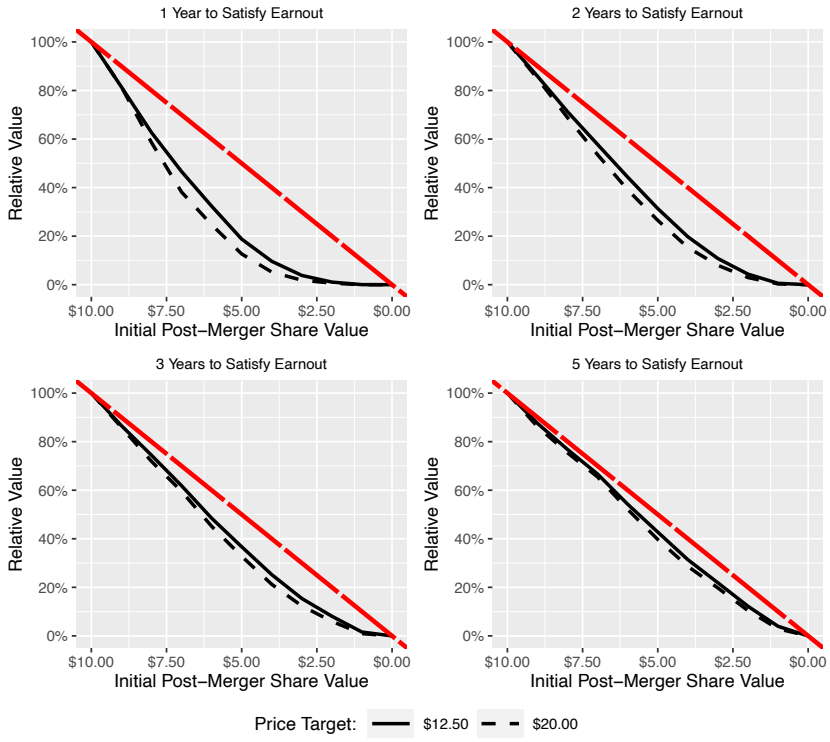


Figure 3 shows that if an earnout has only a one- or two-year period to meet its price target, then sponsors will lose meaningfully more of their compensation if they propose a bad merger, compared to what would occur if sponsors hold unencumbered shares. Yet, for earnouts with three or more years to satisfy price targets, earnouts have almost no impact on sponsor compensation. For instance, in the plot for the five-year earnout, the red and black lines are almost overlapping, showing that the Earnout Shares lose only slightly more value than unrestricted common shares do in response to a bad merger. Furthermore, although Figure 2

shows that the present value of Earnout Shares can vary meaningfully depending on their price threshold, Figure 3 shows that earnout's price threshold has little impact on the relative decline in an earnout's present value as merger value declines. That is, the marginal reduction in sponsor compensation as the value of a merger declines from, say, $8 to $7 is about the same regardless of whether the earnout's price threshold is $12.50 or $20. Thus, higher price thresholds are not effective for purposes of aligning the interests of sponsors and shareholders.

In sum, earnouts with one- or two-year duration can have an impact on both dilution and interest alignment. Higher price thresholds, however, have a meaningful impact only on dilution. Earnouts as currently structured, with durations of five or more years, have minimal impact on either dilution or interest alignment. In the Part IV we further quantify how much earnouts with shorter durations can improve incentive alignment, and we explore additional reforms to sponsor compensation.

IV. How Much Can Sponsor Compensation Be Improved?

Part III has identified several problems that combine to render earnouts ineffective as currently structured: a lack of adjustment for market returns; high price volatility of post-merger SPACs; and long earnout duration, which amplifies the variability of already highly volatile post-merger share prices. Current earnouts neither align sponsor and shareholder interests, nor meaningfully reduce SPAC costs. In this Part IV, we consider whether there is a viable sponsor compensation structure that avoids these problems. We conclude that better structured earnouts can reduce SPAC costs, but that aligning interests is much more difficult. The heart of the problem, as we have said, is that sponsors lose everything in a liquidation, whereas the inherent volatility of post-merger SPAC share prices means that even the most effective compensation structure will leave sponsors with a non-trivial chance of receiving a large payday in the event they propose a value-decreasing merger. Nevertheless, we show that a reconfigured earnout coupled with a large sponsor investment can improve the alignment of sponsor interests somewhat and deter sponsors from going forward with seriously bad deals. That would be a major improvement over earnouts as currently structured.

A. <u>The Challenge of Measuring Value Creation Immediately Post-Merger</u>

In Section III.B, we used a simulation methodology to determine the impact of earnouts on sponsor compensation for mergers hypothetically valued at $10 per share down to mergers valued at zero. If one could be confident of the true value of a post-merger company immediately after the merger closes, then there would be no need for a multi-year earnout. A sponsor could be compensated based on whether the share price on the day of a merger is $10 or more. If it is not, the sponsor would get no compensation. Call it a one-day earnout. Combined with an investment by the sponsor, a one-day earnout would better align sponsor and shareholder interests, thereby providing an incentive for a sponsor to reject at least most deals that would be bad for SPAC shareholders,[64] and signaling to shareholders that the sponsor believes that a merger it has proposed is a good deal.

Unfortunately, there are reasons to doubt that prices on the day a merger closes will be an accurate measure of the value of a merger. First, even if day-one prices were an unbiased market estimate of value – that is, even if they were on average correct – they are likely be a very noisy estimate of such value.[65] A very noisy measure will fail to reward many truly value-enhancing mergers while rewarding, by happenstance, many mergers that are not value-enhancing for SPAC shareholders.[66] Furthermore, the market for SPAC shares immediately after a merger likewise does not appear to be efficient.[67] As an empirical matter, the market tends to overprice SPAC shares immediately after a merger. Indeed, on average over the past decade, the share prices of SPACs have declined consistently for two years following their mergers, which strongly suggests that SPAC shares are overpriced at the time of their merger and for quite some

[64] Even if one assumes that share prices the day of a merger are a perfect measure of value, a sponsor will not know for sure what how markets will value the deal in advance of proposing a merger. The sponsor could predict a range of potential values with the mean being less than $10, but there would be variance around that mean. Thus, a sponsor will still have a reasonable chance of profiting from a merger that is bad in expectation, even with a one-day earnout.

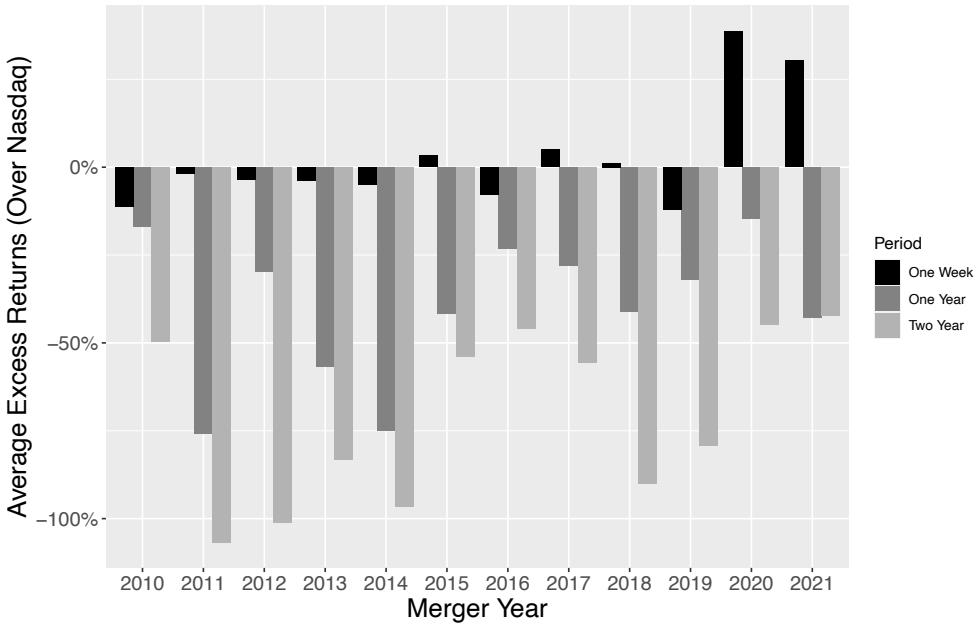
[65] Unfortunately, without an objective, *ex ante* measure of value as of the day a merger closes, it is not possible to directly measure how noisy these day-one prices are compared to some notion of "true," value.

[66] A noisy measure of value would also diminish the effectiveness of earnouts for signaling and incentive alignment, for the same reasons we have previously highlighted in the context of post-merger volatility.

[67] Inefficiency in SPAC securities markets manifests itself in other says as well. As we have shown, the market underprices SPAC units to such a degree that one can earn a return of over 10% with no downside risk. In addition, returns on post-merger shares have consistently been negative for the past decade. Michael Klausner, Michael Ohlrogge and Emily Ruan, *A Sober Look at SPACs*, 39 YALE J. ON REG. 228 (2022).

time thereafter.[68] We show this below in Figure 4.[69] This pricing anomaly is similar to the well-known pricing anomaly in traditional IPOs. IPO shares "pop" on their first day of trading and systematically underperform the market when measured against the first-day close.[70]

Figure 4: Average Post-Merger SPAC Returns (Excess Nasdaq)



There are two implications of the fact that markets likely do not price companies accurately immediately after SPAC mergers. The first implication is that a one-day earnout is unworkable. At least a moderately long period is needed. But longer periods introduce more variance because more random factors can influence share prices. So, there is a tradeoff between allowing more time for the market to accurately price the fundamentals of a company, yet allowing less time for those fundamentals to change in ways that would not have been predictable at the time of the merger. A one- or two-year term, for example, may strike a reasonable balance between these competing forces.[71]

[68] This long-term underperformance persists even after taking account of SPACs' differential exposures to risk factors, whether in a simple CAPM framework or more elaborate factor models.
[69] For mergers completed less than one (or two) years ago, returns are given as of December 15, 2021. Some merger years show excess returns below negative 100%. This can occur, for instance, where the average SPAC loses 80% of its value over a period when the market gains 30% in value.
[70] *See* Jay R. Ritter & Ivo Welch, *A Review of IPO Activity, Pricing, and Allocations*, 57 J. FIN. 1795 (2002).
[71] In theory, if it were possible to quantify the extent to which market prices deviate from true value (due either to noise or bias) at a given point in time post-merger, it would be possible to optimize a time period that would balance

The second implication of the market overvaluing post-merger SPACs is that sponsors should be compensated based on share prices at the end of an earnout's term. This prevents sponsors from profiting from temporary elevations of share prices. This scenario was especially prevalent among SPACs that merged in 2020 and the first half of 2021, as shown in Figure 4. As the figure shows, average prices one-week post-merger were exceptionally high, and were more than sufficient to satisfy most sponsor earnouts. Yet, within six to twelve months after those mergers, a great many SPACs that had appeared to have generated huge returns for SPAC shareholders in fact turned out to be losing deals. Changing earnouts to require that their price thresholds must be met at the end of their terms will help avoid rewarding sponsors whose seemingly good post-merger performance is in fact short-lived. Doing this will both improve alignment of sponsor and shareholder interests, and will also reduce SPAC dilution, since fewer earnouts will pay out.

B. What Can and Cannot be Accomplished through Sponsor Compensation

We now consider whether there may be other ways to structure earnouts to make them effective, or at least more effective than current earnouts. Based on the lessons of Part III, we consider an earnout (a) with a shorter term than current earnouts, (b) with thresholds adjusted for market returns, (c) in which thresholds must be met at the end of the term. We also consider using warrants, rather than shares subject to earnouts, to compensate sponsors. Each of these modifications can reduce the value of a sponsor's promote, and thus reduce a SPAC's dilution. Unfortunately, we find that these modifications still leave a sponsor's interests substantially misaligned with shareholder interests in the decision to go forward with a merger. At best, a sponsor can be deterred from proposing truly bad deals.

As we have explained in Parts II and III, an earnout of any sort must be coupled with a sponsor investment in order to have any chance of bringing sponsor and shareholder interests closer together. The extent to which the sponsor's interest will align with the interests of shareholders depends on both the size of a sponsor's investment and the extent to which an earnout or other compensation mechanism penalizes the sponsor for entering into a low-value

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between the competing forces of allowing more time for markets to accurately value a company, while allowing less time for new random factors to affect its value. Because a company's true value cannot be directly observed, however, such an optimization may well be impossible, and in any event, it lies beyond the scope of this paper.

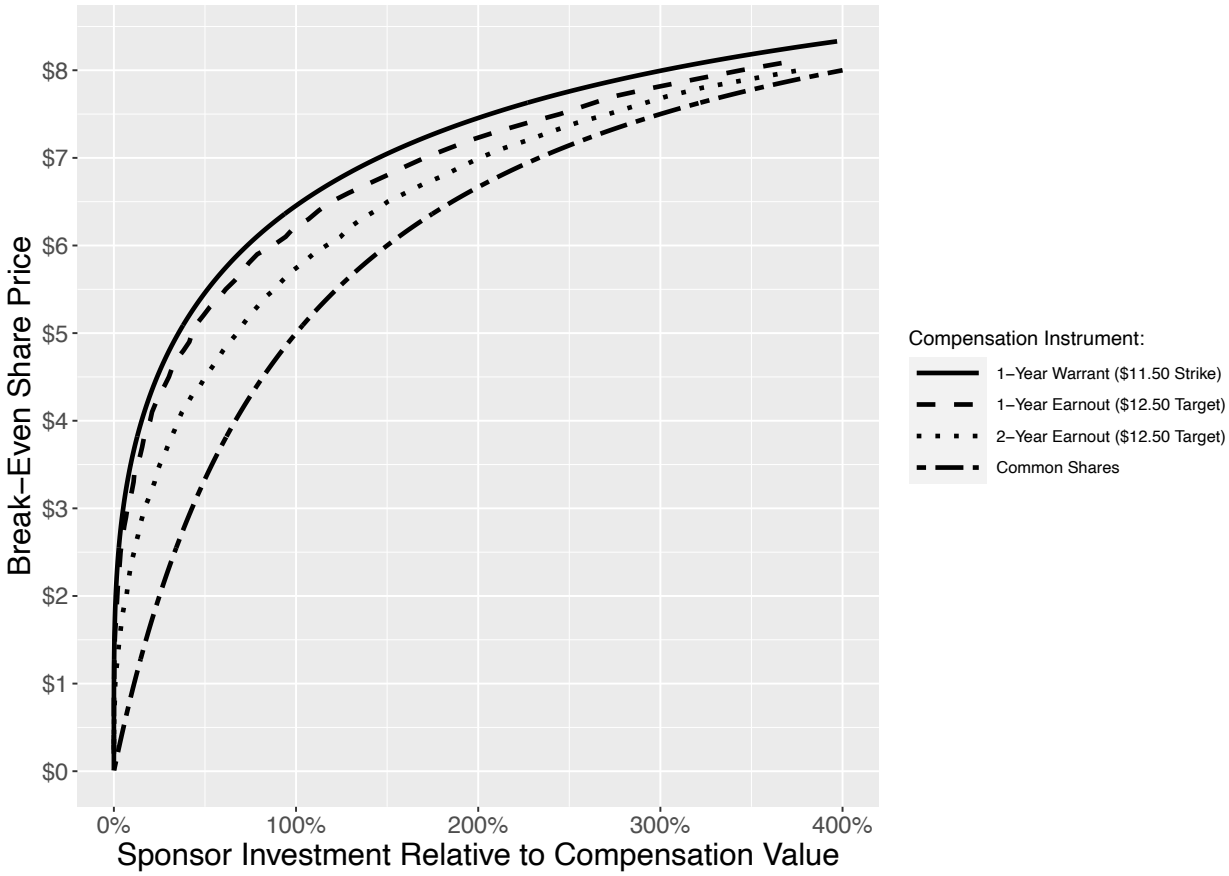
merger. An earnout that does not significantly penalize a sponsor when a SPAC enters into a low-value merger – as is true of the typical earnout today – would require an unrealistically large sponsor investment to make a significant difference in the alignment of interests. A more responsive compensation mechanism would allow for a smaller investment. In this section, we investigate the interaction among investment size, compensation structure, and the alignment of sponsor interests with shareholder interests in rejecting a low-value merger.

Suppose that a sponsor's compensation will be worth $10 million provided the merger it proposes is worth $10 per share. Suppose also the sponsor has pre-committed that it will buy 1 million shares for $10 each in the merger it ultimately proposes. Thus, the sponsor's investment equals $10 million. For simplicity, we will ignore the sponsor's investment at the time of the SPAC's IPO. Now, suppose the sponsor considers a merger worth $8 per share. If the sponsor proceeds with the merger, it will lose $2 million of its $10 million investment. But, if in response to the low-value merger the present value of its compensation is still worth more than $2 million, the sponsor will favor the merger. In other words, for a sponsor to reject this merger, the sponsor would have to face loss in the value of its compensation greater than an 80%. As we show in Figure *3*, even earnouts with a one-year term do not come close to this. If the sponsor makes an investment larger than 100% of the value of its compensation, then a sponsor's compensation will not need to drop as much in response to a bad merger in order to incentivize the sponsor to reject it. But under current SPAC practice, sponsors rarely make such a large investment.

In Figure 5 we quantify and systematize this analysis, using the same simulation methodology that we used in Part III. We consider a range of earnouts with different terms and price targets. We also consider compensating a sponsor with warrants rather than shares subject to an earnout. As a benchmark, we include a promote consisting of unrestricted shares. We assume the value of each compensation instrument to the sponsor is the same (for instance, $10 million in the example above). Thus, for instance, since a share subject to a one-year earnout is more valuable than a one-year warrant, a sponsor would receive more warrants in order to generate total compensation worth a fixed amount, such as $10 million.[72]

[72] We determine the number of shares or warrants needed to give the sponsor $10 million total value based on an assumption of a $10 post-merger share price. We then examine how the sponsor's value drops in response to lower post-merger share values.

Figure 5: Sponsor Incentives to Reject Bad Mergers



The x-axis of Figure 5 measures a sponsor's investment at the time of a SPAC merger, represented as a percentage of the value of the sponsor's compensation. So, for example, if the value of the sponsor's compensation is $10 million, the 100% point on the x-axis would reflect a $10 million investment by the sponsor. The y-axis measures the point below which a sponsor would prefer liquidation rather than proceeding with a merger. The lines in Figure 5 correspond with different compensation arrangements. For instance, if a sponsor makes no new investment at the time of the merger, then it will always have an incentive to pursue a merger rather than allow a liquidation, regardless of the structure of its compensation. With a two-year earnout and a $12.50 threshold, and an investment twice the size of its compensation, a sponsor would go forward with a merger rather than liquidate so long as the value of the merger is at least $7 per share.

Figure 5 highlights both what can and cannot be accomplished through modifications to sponsor compensation. For instance, the bottom most curve on the graph, which corresponds to shares unencumbered by an earnout, shows that even with an investment by the sponsor equal to the size of its promote, the sponsor will have an incentive to reject a merger only if it is worth less than $5 per share – a terrible outcome for SPAC shareholders. By contrast, with the most effective forms of compensation, at the top of the graph – warrants and earnouts with one-year terms – the point at which a sponsor will reject mergers is $6.50 per share. Furthermore, if the sponsor makes an investment equal to two or three times the value of its compensation, the sponsor will have an incentive to reject mergers that are worth less than $7.50 or $8.00 per share.

A positive interpretation of these findings then is that changes in sponsor compensation, coupled with very large investments at $10 per share, can materially improve sponsor incentives compared to the SPAC status quo, which of course is quite bad. Many past SPAC mergers have been terrible, and if compensation arrangements along the lines we consider here induce sponsors to liquidate rather than proceed with the worst of deals, this would be a positive development. Nevertheless, even the best compensation arrangement still leaves a wide range of mergers that will be profitable to sponsors but quite poor for SPAC shareholders. Thus, if SPAC shareholders hope to reliably make money on their investments, they will need to either depend on their own abilities to assess the value of target companies – which, based on past experience, means rejecting most deals. Alternatively, shareholders will need to identify sponsors willing to liquidate when they cannot find a winning deal for shareholders, despite having no financial incentive to do so. Over the past decade, we are aware of no such voluntary liquidation.

V. Regulatory Implications

We have shown that there is far less than meets the eye in earnouts. They do not align the interests of sponsors and shareholders, and as currently structured they do not significantly reduce the cost that a sponsor's promote imposes on SPAC shareholders. Some SPACs have described their earnouts as aligning the interests of sponsors and shareholders – a description that we have shown does not match with reality.[73] But even a bland description of an earnout's mechanics with no such affirmative claims is deceptive in that the terms of an earnout do appear

[73] *See supra* Part I.

to align interests and reduce costs. After all, why else would the earnout have been adopted? Some analysis is necessary to show that an earnout is not what it appears to be, and thus to comply with the SEC's mandate that SPACs "clearly describe the conflicts of interest" created by SPAC sponsors' compensation arrangements.[74] Thus, mandatory disclosure of the actual economics of earnouts is warranted.

At the time of a merger, SPACs should disclose the economics of sponsor compensation in two ways. First, they should disclose quantitatively the extent to which sponsors' interests align with the interests of shareholders. This would go beyond the typical boilerplate in SPAC proxy statements in which they recite the fact that sponsor and SPAC management have interests that are different from the interests of shareholders. Second, SPACs should disclose, again quantitatively, how sponsor compensation dilutes the value of SPAC shares.

A. Disclosure of Alignment of Sponsor and Shareholder Interests

SPACs routinely disclose in their proxy statements the ways in which their sponsors have interests in a merger that are different from shareholders' interests. These disclosures are essentially boilerplate recitations of the fact that sponsors have shares that they received at nominal cost, and that they will lose those shares if a SPAC liquidates.[75] This sort of disclosure does not comply with the SEC's mandate to describe conflicts of interest resulting from sponsor compensation because it fails to show investors the value of the sponsor's compensation in the event that the merger turns out to be worth less than $10. These disclosures are more misleading

[74] Division of Corporation Finance, *Special Purpose Acquisition Companies CF Disclosure Guidance No. 11*, SEC. & EXCHANGE COMM. (Dec. 22, 2020), https://www.sec.gov/corpfin/disclosure-special-purpose-acquisition-companies. This requires that SPACs "clearly describe the conflicts of interest that result from sponsors', directors', officers' or their affiliates' securities ownership, compensation arrangements or relationships with affiliated entities that may create financial incentives to complete a business combination transaction even if the transaction may not be in the best interest of other shareholders." Similarly, SEC Chairman Gary Gensler noted in testimony before the House Financial Services Committee on October 5, 2021, that "There are a lot of fees and potential conflicts inherent within SPAC structures, and investors should be given clear information so that they can better understand the costs and risks." Testimony of Gary Gensler, Chairman, U.S. Securities Exchange Commission, Testimony before the United States House of Representative Committee of Financial Services (Oct. 5, 2021), https://www.sec.gov/news/testimony/gensler-2021-10-05?utm_medium=email&utm_source=govdelivery.

[75] *See, e.g.*, Investindustrial Acquisition Corp., Prospectus (Form 424B3) (Nov. 29, 2021), "[S]hareholders should be aware that … the … Sponsor … [has] interests in the Business Combination … that are different from, or in addition to, those of other [SPAC] shareholders generally. …These interests include, among other things … the fact that the [SPAC] Sponsor paid an aggregate of $25,000 for the 10,062,500 Founder Shares … and such securities will have a significantly higher value upon the consummation of the Business Combination."

when coupled with assertions by sponsors about earnouts, such as that an earnout ensures a sponsors' interests are "fully aligned," with those of SPAC shareholders.[76]

Using the methodology we have used, or a similar methodology, SPACs should be required to disclose quantitatively the present value of a sponsor's compensation under alternative assumptions regarding the value of a proposed merger. As we have said, post-merger SPACs use this methodology in valuing earnouts, so it is not a lot to ask SPACs to use this methodology when it proposes a merger. For example, the SPAC should disclosure the present value of the sponsor's interest if the merger is worth $10 per share, as all SPAC mergers purport to be worth, and how much it would be worth if the SPAC instead turns out to be worth $9, $8, $7, etc. The SPAC could display the results of those valuations graphically, as we have, or in any equivalent manner. In support of its estimates, the SPAC should be required to disclose its methodology and its assumptions, as we have, regarding the expected volatility of the post-merger company, the discount rate it has used, and any other assumptions that go into its valuations.

SPACs should also be required to disclose how far a SPAC's post-merger share price must fall below $10 for the sponsor to do better with merger than it would in a liquidation.[77] This is the computation underlying Figure 6, above. As we have explained, for a sponsor with no investment concurrent with the merger, this break-even price is zero – a sponsor would favor a merger over liquidation so long as the merger worth anything above zero. But for a sponsor with a sizeable investment and a well-structured earnout, this break-even price may be substantially higher.

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[76] Fortress Value Acquisition Corp. II, Definitive Proxy Statement (Form DEF14A), at slide of investor presentation (Feb. 22, 2021), arguing that due to an earnout and a sponsor PIPE investment, sponsor incentives are "fully aligned," with SPAC shareholders.

[77] We make this recommendation in the current version of Klausner et all (2022) *supra* note 12, and in a memo we distributed to the SEC's Investor Advisory Committee (IAC). The IAC's recent report on SPACs suggested that such a break-even point disclosure may be helpful to SPAC investors. *See Recommendations of the Investor as Purchaser and Investor as Owner Subcommittees of the SEC Investor Advisory Committee regarding Special Purpose Acquisition Companies*, SEC. & EXCHANGE COMM. (Aug. 26, 2021), https://www.sec.gov/spotlight/investor-advisory-committee-2012/draft-recommendation-of-the-iap-and-iao-subcommittees-on-spacs-082621.pdf. Furthermore, SEC Commissioner Hester Peirce, in a speech at Fordham Law School on October 22, 2021 stated that disclosure of sponsor's break-even points for mergers could "help people understand what the mechanics of a particular SPAC are." Speech of Hester Peirce, Commissioner, U.S. Securities Exchange Commission, Inside Chicken: Remarks before Fordham Journal of Corporate and Financial Law Conference: "Here to Stay: Wrestling with the Future of the Quickly Maturing SPAC Market" (Oct. 22, 2021) https://www.sec.gov/news/speech/peirce-remarks-fordham-journal-102221.

B. Disclosure of the Cost of Sponsor Compensation

In an earlier article, we analyzed the multiple ways in which the SPAC structure dilutes the economic interests of SPAC shareholders, and we proposed regulations requiring disclosure of the nature, extent and sources of that dilution.[78] The core disclosure we proposed is a statement of the amount of net cash per share that a SPAC holds at the time of a merger after taking account of all sources of dilution. The SEC has recently indicated that it is considering regulations implementing our suggestions.[79]

A major source of dilution inherent in the SPAC structure is the sponsor's promote. An earnout purports to reduce the present value of a sponsor's promote, and depending on its terms, it may do so to some degree. As part of a SPAC's disclosure of overall dilution, the SPAC should disclose the impact of an earnout. Currently, however, SPACs often disclose sponsor shares subject to an earnout as though they do not exist.[80] That is deceptive. Just as we have done above, a SPAC should disclose the value of shares subject to an earnout.

Conclusion

SPAC advocates claim that earnouts are a new innovation that align the interests of sponsors and shareholders and reduce the cost of the dilution inherent in SPACs. None of these claims is true. Earnouts are not new, they do not align interests, and they do not meaningfully reduce costs. Earnouts could be improved to a degree, particularly by dramatically reducing the time periods allowed to satisfy their price targets, adjusting those price thresholds to movements in market prices, and requiring that thresholds be met at the end of the earnout's term rather than at any time over the term of the earnout. These changes can meaningfully reduce the value of shares subject to earnouts, and thus reduce the dilution imposed on SPAC shareholders by the

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[78] Klausner et al. (2022) *supra* note 12. *See also* Klausner and Ohlrogge, *SPAC Disclosure of Net Cash Per Share* (2022), *supra* note 22.

[79] A report by the SEC's Investor Advisory Committee (IAC) from August 26, 2021 stated that the cash per share disclosures that we recommended could "enhance[e] disclosure," and help investors better "understand the impact of de-SPAC dilution." *Supra* note 77. SEC Chairman Gary Gensler, in a speech to the IAC on September 9, 2021, stated that he agreed with the IAC's "assessment that we can do more to strengthen SPAC disclosures, especially around dilution." Statement of Gary Gensler, Chairman, U.S. Securities Exchange Commission, Prepared Remarks before the Investor Advisory Committee (Sep. 9, 2021), https://www.sec.gov/news/public-statement/gensler-iac-2021-09-09#_ftnref4. SEC Commissioner Hester Peirce likewise recently noted in a recent speech on October 22, 2021, at Fordham Law School that the IAC's recommended disclosure of "cash per share … would aid investors under to understand" SPACs better. *Supra* note 77.

[80] *See supra* note 50 and accompanying text.

sponsor's promote. In addition to these changes, earnouts become more effective at aligning sponsor and shareholder interests if they are combined with a substantial investment by a sponsor. But even with these improvements, earnouts fall substantially short of aligning interests. At best, a well-structured earnout coupled with a large sponsor investment can deter a sponsor from pursuing a merger that is a seriously bad deal for shareholders.

SPAC investor presentations and proxy statements are misleading in their descriptions of earnouts. Some depict sponsor shares subject to earnouts as being essentially non-existent, thus deceptively understating sponsor compensation and SPAC costs. Similarly, some SPAC investor presentations and proxy statements affirmatively claim that earnouts align interests. Others simply describe the mechanics of earnouts. Even those, however, are misleading in that they fail to explain how an earnout has much less of an impact that it appears to have. They thus fail to comply with the SEC's mandates for SPACs to clearly describe conflicts of interest arising from SPAC sponsor compensation arrangements. We therefore propose that the SEC require SPACs to disclose the present value of a sponsor's interest in a merger contingent on the merger's value. We further propose that a SPAC disclose how low the value of a proposed merger could go before the sponsor would be better off than it would be with a liquidation.

Appendix

A.1 Sponsor Incentives to Continue Searching for Better Mergers

As we show in the body of this paper, even the best structured earnout will not align the interests of a sponsor and shareholders with respect to the choice of a liquidation over a bad merger. When a sponsor proposes a merger, it is reasonable to assume that the sponsor believes that pursuing this merger is better than continuing to look for a better one. Nevertheless, there may be some situations in which SPAC shareholders *might* benefit from the sponsor continuing to search for a merger longer than it would otherwise be inclined. Consider a sponsor that searches for some time and identifies a merger it expects to be worth $8 per share. The sponsor believes that if it declines to pursue this merger[81] and continues to search, it has a 25% chance of finding a merger worth $10 and a 75% chance of finding a merger worth $5. Since the expected value of these future prospects is $6.25 (25% x $10 + 75% x $5), a sponsor may be inclined to still propose the $8 merger as long as it believes it will be able to get enough investors to go along.[82] If there were, however, a "perfect earnout" that cancels all sponsor shares and warrants if the sponsor proposes a merger worth less than $10, then the sponsor would reject the $8 merger and continue searching in the hopes that it finds the $10 merger.

It is not obvious that this continued search is indeed beneficial for SPAC shareholders. By construction, the expected value of the next best merger the sponsor finds will be worse (otherwise, the sponsor would have chosen to continue searching even without an earnout). Unless the sponsor also makes a large investment concurrent with the merger, the sponsor will still propose the $5 merger if that is the best one it finds through its continued search. Given this, SPAC shareholders will only be better off if it is easier for them to recognize the $5 merger as bad than it is to recognize the $8 merger as bad. This is plausible (at least for some shareholders) but far from certain.

[81] Presumably, if this sponsor declines to pursue a merger with this target, then the target will merge with another SPAC, go public through an IPO, be acquired in a strategic acquisition, or otherwise be unavailable for the SPAC. If it were otherwise, then the sponsor's incentives from the promote alone would already be sufficient to induce it to continue searching for a better target, since there would be nothing to be lost for the sponsor from doing so, and a potential upside.

[82] As we document in our prior work, SPAC sponsors have historically had little problem completing mergers even when they are terrible for investors.

Furthermore, once one moves from a "perfect earnout" to the best that is realistically achievable, the ability for an earnout to induce a sponsor to continue searching for a target becomes much more limited. To see this, consider the following table, which roughly reflects how much can be accomplished with the most effective earnout identified in Part III (an earnout with a one-year term). This table assumes a promote that is worth $100 million if the merger is worth $10 per share and then traces the reduction in the promote at lower merger values. We will assume optimal incentive conditions for this scenario, which means the earnout covers 100% of the sponsor's shares and warrants, and that it is adopted at the time of the SPAC's IPO.

Share Value	Sponsor Value
$10	$100 million
$9	$80 million
$8	$60 million
$7	$50 million
$6	$30 million
$5	$20 million

Even given these optimal conditions, a sponsor will choose to propose an $8 merger it has found rather than continuing to search for a 25% chance of finding a $10 merger and a 75% chance of finding a $5 merger. The sponsor will receive $60 million in value for proposing the merger worth $8. If the sponsor rejects this merger and continues searching, it will have a 25% chance of finding a $10 merger and getting $100 million of value. If not, it will find a $5 merger, giving it $20 million in compensation. The sponsor's expected profits if it rejects the current merger are thus $40 million – much less than it gets from proposing the current merger.

The example that we use here may seem unrealistically pessimistic about the sponsor's ability to find a better merger if it continues to search. One could imagine a sponsor with a 50% chance of finding a $10 merger, and a 50% chance of finding a $7 merger. Yet, if this is the case, the sponsor's expected value from continuing the search will be $8.50, in which case the sponsor would already have continued to search (rather than propose an $8 merger) based on the incentives from its promote alone. There is thus only a limited range of scenarios in which a

sponsor without an earnout would propose a given merger, but a sponsor with an earnout would continue searching for a better deal.[83]

It is also not clear that an investment by the sponsor will materially improve the incentives in this situation. Suppose the sponsor pre-commits to buy 10 million additional shares for $10 each in any merger it proposes. The sponsor again faces the prospects of proposing an $8 merger or continuing to search, in which case it has a 25% chance of finding a $10 merger and a 75% chance of finding a $5 merger. If the sponsor proposes the $8 merger, it will earn $60 million in compensation (as with above), but now it will lose $20 million on its new investment, so it comes out $40 million ahead on the deal. Now, consider the sponsor's prospects if it passes on the $8 merger and continues searching. If the sponsor identifies the $10 merger, it will make $100 million from its promote and come out even on its investment. If the sponsor identifies a $5 merger, it will now decline to propose it[84] and instead choose liquidation, in which case it gets nothing. Thus, if the sponsor passes on the $40 million profit it will make by proposing the $8 merger, it will have a 25% of making $100 million and a 75% chance of making nothing, giving it an expected profit of $25 million. The addition of the large investment by the sponsor is therefore not effective at improving the sponsor's incentives to keep searching for a target in this scenario.

The fact that sponsors may at times have the option to continue searching for a better merger also does not materially change the effectiveness of earnouts for signaling a sponsor's confidence in a merger. By proposing a merger, a sponsor can be seen as signaling that it views that merger as better than its expected profits if it continues searching. Yet, as we show above, even with an earnout in place, a sponsor will frequently be better off proposing a bad merger than continuing to search in the (small) hope of finding a better one. A further difficulty is that for a sponsor to signal to SPAC shareholders that it believes the merger it is proposing (with the earnout the merger includes) is better than the sponsor's prospects if it continues to search,

[83] It is also not obvious that there is much to be gained from a sponsor continuing to search if it has not already found an attractive merger within a relatively short period of time. For instance, while SPACs traditionally allowed 18 to 24 months for sponsors to complete a merger or seek an extension, recent SPAC IPOs are shortening this dramatically. For SPAC IPOs from 2015 to 2020, the average number of months allowed to complete a merger was 21.5, yet for SPAC IPOs during the second half of 2021, the average has dropped dramatically, to 16.6 months, and 23% of these more recent IPOs allow 12 months or less to complete a merger. (Data from SPACInsider.com.) This may reflect a recognition by market participants that a sponsor either will or will not be able to find an attractive merger, and that there are limited benefits for an unskilled sponsor to continue searching

[84] For the $5 merger, the sponsor will lose $50 million on its $100 million new investment, and with the earnout it will only make $20 million from its promote to partially offset this loss.

SPAC shareholders would need to know what those future prospects of the sponsor are. Since SPAC shareholders could at best guess at those future prospects (or even more precisely, guess at the sponsor's beliefs about those future prospects), any signal a sponsor sought to send would be an extremely noisy and uninformative one at best.

A.2 Distribution of 5-Year IPO Returns

In Part II, we analyze the share prices of SPACs five years after completing their mergers. We show that these prices tend to be either quite high, in which case any conceivable earnout will have been satisfied, or quite low, in which case an earnout will cancel shares worth very little. In particular, among the SPACs in Figure *1*, the average value of shares that would have been cancelled for not meeting a 5-year, $15.00 price target is $2.76, and the average value of shares that would have been cancelled for not meeting a 5-year, $12.50 price target is $1.69.

We do not know what the 5-year performance of more recently completed SPAC mergers will be. But, we may gain some insight by examining the prices of firms that have completed traditional IPOs five years after the IPOs. Post-IPO firms have lower volatility than firms that go public through SPAC mergers.[85] To account for this, we compute the standard deviation of the daily log return for each SPAC that merged from 2019 through July 2021. For each of these SPACs, we find the closest match, based on daily standard deviation of log returns, among the set of traditional IPOs completed between January 2010 and July 2016, to allow us five years to observe post-IPO price changes.[86] For each of these companies, we measure the percent change in its share price[87] between the end of its first day of trading and five years later.[88] Figure 6 plots the distribution of these returns. By five-years post-IPO, only 25% of these firms had share price

[85] In particular, we examine the standard deviation of daily log stock returns for firms that went public through SPAC mergers, and firms that went public through traditional IPOs. For traditional IPOs, mean and median standard deviations are 0.035 and 0.032. For firms that went public through SPAC mergers since 2010, mean and median standard deviations are 0.077 and 0.052. Even for companies that went public through SPAC mergers in 2020 and 2021, mean and median standard deviations are 0.062 and 0.051, respectively.

[86] To build our sample of recent IPOs, we start by identifying the set of firms that had at least $100 million in market capitalization after going public, so as to make them relatively comparable to the set of companies going public by merging with SPACs.

[87] Because earnouts do not adjust their price targets when ordinary cash dividends are paid, we look only at percent changes in share prices, rather than total returns presuming dividend reinvestment, as is more common in many other settings.

[88] We measure these price changes starting from the closing price on the first day a firm's stock trades after its IPO so as to exclude any gains shareholders may experience on account of the stock price appreciation between the IPO listing price and the first day's closing price – i.e. to exclude the so-called "IPO pop."

changes between negative 50% and positive 50% (the equivalent to a SPAC having share prices between $5 and $15).[89] In other words, if these firms that went public through traditional IPOs had included earnouts on terms similar to typical SPAC sponsor earnouts, the earnouts would have had a meaningful impact on payouts in only roughly 25% of the cases. In these instances, companies that did not meet earnout price targets equivalent to $12.50 in a SPAC (in other words, targets requiring 25% post-IPO growth within 5 years), the average value of cancelled shares would have been $3.36[90] – somewhat higher than the comparable figure for the SPACs discussed in Part II, but still quite low.[91]

In sum, while we cannot be sure that today's SPACs will be as volatile as prior years' SPACs or IPOs, if they are, earnouts will be relevant in only a small number of SPACs.

Figure 6: Variability of Share Price Changes 5 Years After Traditional IPOs

[89] By contrast, among companies with $10 billion or more in market capitalization, roughly the cutoff for inclusion in the S&P 500, 54% will see stock price changes over five years that are between negative 50% and positive 50%. This is in part due to the much lower volatility of these companies, and in part due to their typically much higher dividend rates. This may help to explain why performance vesting stock and options, which are structured similarly to sponsor earnouts but used as executive compensation tools, are relatively common among large firms. *See* J. Carr Bettis et al., *Performance-vesting provisions in executive compensation,* 66.1 *J. of Acct. & Econ.* 194-221 (2018).

[90] In other words, for traditional IPO firms that did not appreciate at least 25% at least at some point within 5 years of the IPO, the average share price was down 66.4% from the price on the day of the IPO's close as of five years following the IPO.

[91] For traditional IPO companies that did not meet earnout price targets equivalent to $15.00 in a SPAC (in other words, targets requiring 50% post-IPO growth within 5 years), the average value of cancelled shares would have been $3.43.